

# METHOD AND APPARATUS FOR RIVET REMOVAL AND IN-SITU REHABILITATION OF LARGE METAL STRUCTURES

## Abstract

A method and apparatus are disclosed for replacing riveted metal components in place on existing metal structures. The method includes the steps of positioning a rivet removing tool at a rivet on an in situ structural component that is maintained in place by a plurality of rivets, encoding the position of the rivet removing tool at the rivet and transmitting the encoded position of the rivet to a processor, removing the rivet, sequentially moving the rivet removing tool to each of the rivets on the structural component that hold the structural component in place, sequentially encoding the position of the rivet removing tool at each rivet, transmitting the encoded the position of each rivet to the processor, and removing each rivet with the tool when the tool is at the rivet, designing a replacement component based upon the encoded positions of the rivets and fabricating the replacement component based on the transmitted rivet positions.